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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,069	01/30/2006	Akiko Yuasa	MAT-8795US / P34720-05	2134
52473	7590	03/23/2010	EXAMINER	
RATNERPRESTIA P.O. BOX 980 VALLEY FORGE, PA 19482			ZACHARIA, RAMSEY E	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/595,069	Applicant(s) YUASA ET AL.	
	Examiner Ramsey Zacharia	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 1-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1/30/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of claims 19-27 in the reply filed on 16 February 2010 is acknowledged. The traversal is on the ground(s) that, since claim 19 depends from claim 1, claim 19 cannot be examined without also examining claim 1. This is not found persuasive because, as the US national stage of international application PCT/JP2004/008850, this application is subject to restriction under the rules of the unity of invention. Since there is a lack of unity of invention between claim 1 and claim 19 (for the reasons outlined in the Office action mailed 14 January 2010), the restriction is maintained. Moreover, it is noted that the film for suppressing conduction of radiation heat as claimed in claim 1 is broader than the protection layer of claim 19 since the infrared-ray-reflection layer in claim 19 is required to be a metal foil while the infrared-ray-reflection layer of claim 1 may be any material provided it has an infrared-ray reflectivity of 50% or higher - therefore, an examination of claim 19 can be performed without performing a full and proper examination of claim 1.

The requirement is still deemed proper and is therefore made FINAL.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 20 and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. The phrase "with the resin film and the metal foil alternately" at the end of claim 20 renders the claim indefinite because its meaning is unclear.

6. Claim 25 is rendered indefinite because it is unclear if the metal foil of the protection layer is intended to be the same gas-barrier layer recited in claim 19 or a second gas-barrier layer in addition to the gas-barrier layer of claim 19.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 19, 20, 22, 23, and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takematsu (JP 2003-271044) in view of Sasaki et al. (US 4,076,889).

Takematsu teach a vacuum insulation material comprising a core material covered by a laminated film comprising a seal layer, a metal foil gas barrier layer, and a protective layer

Art Unit: 1794

(paragraph 0017). A thermally reflective sheet, such as an aluminum sheet, may be attached to the side of the insulation closest to the heat source (Figure 6 and paragraph 0025)

Takematsu does not teach the use of a film as recited in claim 1 provided that metal foil is the infrared-ray-reflection layer as the thermally reflective sheet. However, Takematsu do teach the use of a thermally reflective sheet that includes aluminum with a finished surface capable of reflecting radiation heat (see paragraph 0025).

Sasaki et al. teach a heat-insulation material which is used for covering interior or exterior surfaces for protection (column 1, lines 5-9). The material may be applied to heat insulators (column 4, lines 1-7). The insulation comprises metal deposited on the surface of a polyfluoroolefin or fluoroolefin copolymer film and provides as effective insulation of radiant heat as when the insulation is effected by causing the radiant heat to be reflected by the mirror face of a metalized plastic film (column 1, lines 51-64). The metal and it may be adhered to the polyfluoroolefin or fluoroolefin copolymer film by means of an adhesive of the type which neither absorbs heat rays nor undergoes discoloration as by the action of heat (column 3, lines 56-63). Aluminum is used as the metal in the embodiments of the Examples; aluminum is also disclosed in the instant specification as high in IR reflectivity (see page 14, lines 1-2 of the specification). The polyfluoroolefin or fluoroolefin copolymer film may be ethylene tetrafluoride-ethylene copolymer (column 2, lines 38-40), i.e. ETFE which is disclosed as having an IR absorptivity of 8% (see page 13, lines 11-12 of the instant specification). Thus, the heat-insulating film of Sasaki et al. employing ETFE as the polyfluoroolefin or fluoroolefin copolymer film and aluminum as the metal should intrinsically possess an infrared-ray reflectivity of 50% or higher since: (1) ETFE has an absorptivity of lower than 25%, (2)

Art Unit: 1794

aluminum has high IR reflectivity, and the adhesive is specifically chosen so that it neither absorbs heat rays nor undergoes discoloration as by the action of heat.

It would be obvious to use the heat-insulation film of Sasaki et al. as the thermally reflective sheet of Takematsu since it has been held that the selection of a known material (e.g. the heat-insulation film of Sasaki et al.) based on its suitability for its intended use (e.g. laminate to be adhered to a heat insulator) supported a *prima facie* obviousness determination. See MPEP 2144.07.

Regarding claim 20, the limitations of this claim are taken to be met since the application of the heat-insulating material to the laminate film of Takematsu will result in a structure comprising alternating metal and resin films since the laminate also comprises metal and resin films.

9. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takematsu (JP 2003-271044) in view of Sasaki et al. (US 4,076,889) as applied to claim 19 above, and further in view of Ishimaru (US 5,714,272).

Takematsu taken in view of Sasaki et al. teach all the limitations of claim 21, as outlined above, except for the use of a layered metal foil as the infrared-ray-reflection layer.

Ishimaru et al. teach a heat insulating film comprising a thin metal layer designed to repel infrared rays efficiently (column 1, lines 26-31). The metal layer comprises a first layer of aluminum or copper crystal grains defining a flat surface coated with a thin metal layer (column 2, lines 36-55).

Art Unit: 1794

It would be obvious to use the two layer metal film of Ishimaru et al. as the thermally reflective metal foil of Sasaki et al. since it has been held that the selection of a known material (e.g. thermally reflective foil of Ishimaru et al.) based on its suitability for its intended use (e.g. the reflective layer in a heat insulating film) supported a *prima facie* obviousness determination. See MPEP 2144.07.

10. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takematsu (JP 2003-271044) in view of Sasaki et al. (US 4,076,889) as applied to claim 19 above, and further in view of Urata et al. (US 2003/0134078).

Takematsu taken in view of Sasaki et al. teach all the limitations of claim 24, as outlined above, except for the use of polyphenylene sulfide as the protection layer.

Urata et al. is directed to a vacuum heat insulator comprising a laminate bag containing an insulating core (paragraph 0016). Polyphenylene sulfide may be used as the protective layer (e.g. paragraph 0126-0172).

It would be obvious to use polyphenylene sulfide for the protective layer of Sasaki et al. since it has been held that the selection of a known material (e.g. polyphenylene sulfide) based on its suitability for its intended use (e.g. protective layer for metal foil in a thermally reflective laminate) supported a *prima facie* obviousness determination. See MPEP 2144.07.

Art Unit: 1794

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (571) 272-1518. The examiner is working a part-time schedule and is periodically in the office.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho, can be reached at (571) 272-1123. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Ramsey Zacharia/

Primary Examiner, Art Unit 1794